

Application Serial No: 09/983,047

Attorney Docket No. 78381

In reply to Office Action of 03 September 2003

AMENDMENTS TO THE CLAIMS

Claims 1 and 2 (canceled)

3. (currently amended) A sensing device ~~according to claim~~
2 which comprises:

at least one optical fiber supported in a structure;

a movable mass supported within the structure; and

means for detecting changes in tension in said at

least one optical fiber due to movement of the

movable mass;

wherein said detecting means comprising at least one

fiber optic Bragg grating written into a core of

each fiber of said at least one optical fiber;

and

wherein said sensing device has a plurality of optical

fibers and a first fiber optic Bragg grating

associated with a first one of said optical

fibers has a first reflective wavelength and a

second fiber optic Bragg grating associated with

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a second one of said optical fibers has a second reflective wavelength, which second reflective wavelength is different from said first reflective wavelength.

4. (currently amended) A sensing device according to claim 3 [[2]] wherein said detecting means comprises a plurality of fiber optic Bragg gratings associated with each of said optical fibers.

5. (original) A sensing device according to claim 4 wherein each of said fiber optic Bragg gratings associated with each of said optical fibers has a different reflective wavelength.

6. (currently amended) A sensing device according to claim 3 [[1]] wherein said detecting means comprises a fiber optic Bragg grating laser sensor associated with each of said optical fibers.

7. (currently amended) A sensing device ~~according to claim 1 further comprising~~ which comprises:

at least one optical fiber supported in a structure;

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a movable mass supported within the structure;

means for detecting changes in tension in said at
least one optical fiber due to movement of said
movable mass; and

said at least one optical fiber supported in said
structure further being a plurality of optical
fibers supported in said structure and said
movable mass being surrounded by said optical
fibers and being in contact with said optical
fibers.

8. (original) A sensing device according to claim 7,
wherein said structure comprises a cage.

9. (original) A sensing device according to claim 8
further comprising a gap between each side of said mass and
said cage and said gap being sufficiently small to limit
motion of said mass in shock or high acceleration and to
limit the maximum tension seen by each of said optical
fibers.

10. (currently amended) A sensing device ~~according to~~
~~claim 1 wherein said sensing device has~~ which comprises:

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at least one optical fiber supported in a structure;

a movable mass supported within the structure;

means for detecting changes in tension in said at

least one optical fiber due to movement of said

movable mass; and

said at least one optical fiber comprises a single

optical fiber having a serpentine configuration

with a plurality of formed by the optical fiber

being formed into a winding path comprised of at

least three legs and wherein said detector means

comprises a detector in each of the legs.

Claims 11-14 (cancelled).